

REPLACEMENT SHEET

Application Serial No. 09/653,406

Art Unit 1618

16

1. Synthesis of copolymer

$$\text{CH}_2=\text{C}(=\text{O})-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{C}(=\text{O})-\text{O} + \text{H}_2-\text{C}(=\text{O})-\text{CH}_2-\text{C}(=\text{O})-\text{O}-\text{CH}_2-\text{C}(=\text{O})-\text{O}-\text{S}-\text{C}(=\text{O})-\text{NH}-\text{PEG}-\text{C}(=\text{O})-\text{NH}-\text{S}-\text{C}(=\text{O})-\text{O}-\text{CH}_2-\text{CH}_2-\text{C}(=\text{O})-\text{O}-\text{CH}_2-\text{CH}_2-\text{C}(=\text{O})-\text{O}-\text{S}-\text{C}(=\text{O})-\text{NH}-\text{PEG}-\text{C}(=\text{O})-\text{NH}-\text{S}-\text{C}(=\text{O})-\text{O}$$

2. Formation of S-nitroscysteine pH 2

$$\text{ACRL-PEG-Cys} + \text{NaNO}_2 \xrightarrow{\text{pH 2}} \text{ACRL-PEG-CysNO}$$

3. Photopolymerization

$$\text{ACRL-PEG-CysNO} + \text{CH}_2=\text{C}(=\text{O})-\text{O}-\text{CH}_2-\text{CH}_2-\text{C}(=\text{O})-\text{O}-\text{CH}_2=\text{CH}_2 \xrightarrow{\text{UV}}$$

$$+ 2,2\text{-Dimethoxy-2-phenylacetophenone}$$

4. Release of NO

$$\text{CysNO} \xrightarrow{\text{pH 7.4}} \text{S-S} + \text{NO}$$

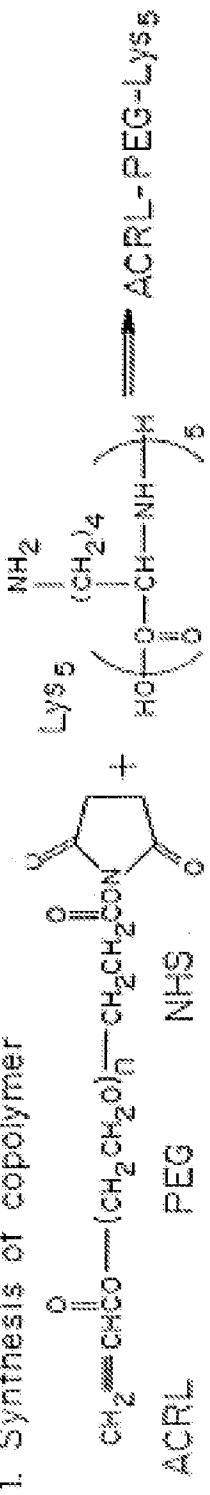
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FIG. 2

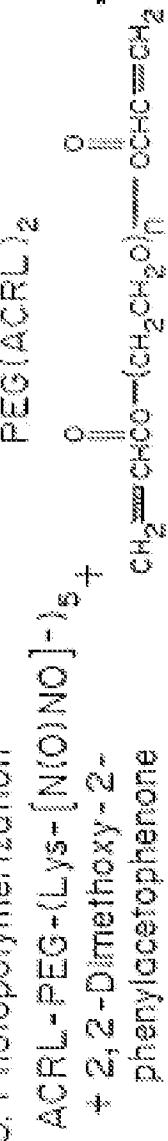
1. Synthesis of copolymer



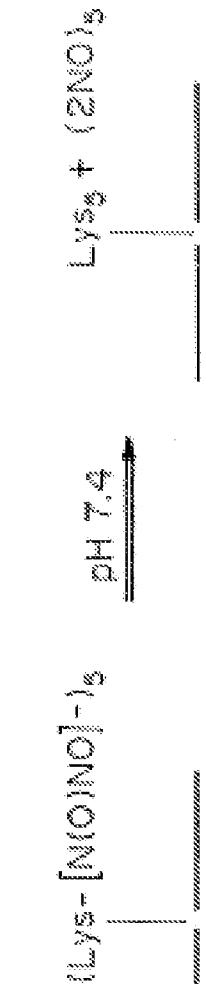
2. Formation of NO_x-nucleophile complex



3. Photopolymerization



4. Release of NO



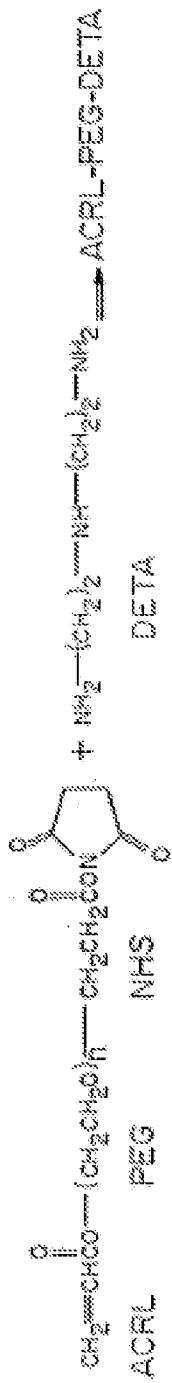
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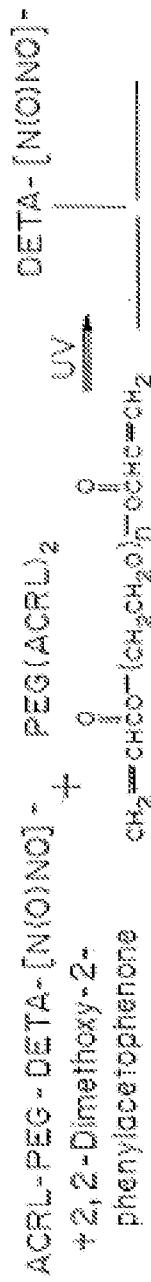
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FIG. 5

Synthesis of co-copolymer



2. Formation of NO - nucleophile complex
 $\text{ACRL-PEG-DETA} + \text{NO gcs in H}_2\text{O} \longrightarrow \text{ACRL-PEG-OETA-[NOONO]}$



DETA + 3NO → Release of NO

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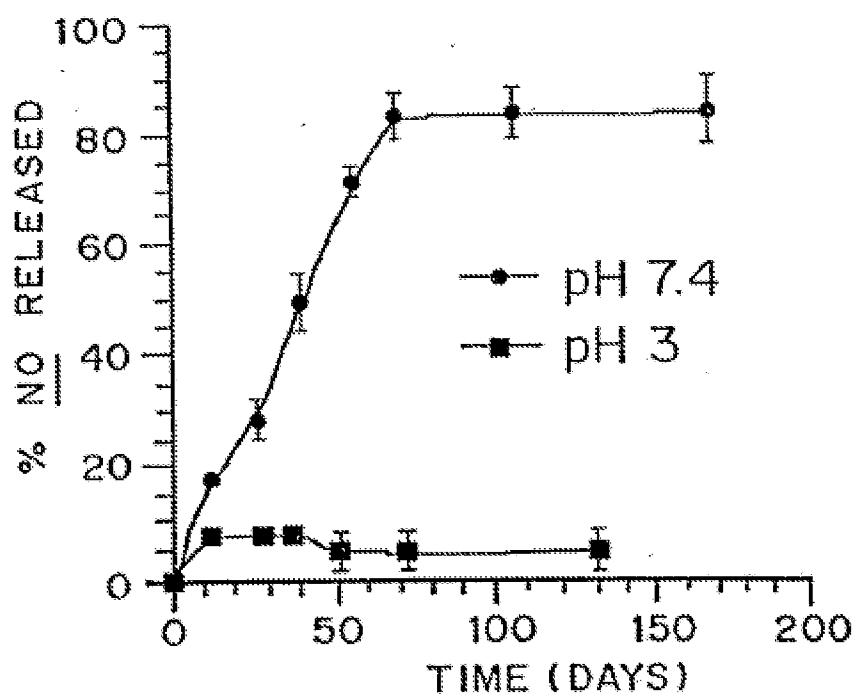


FIG. 4

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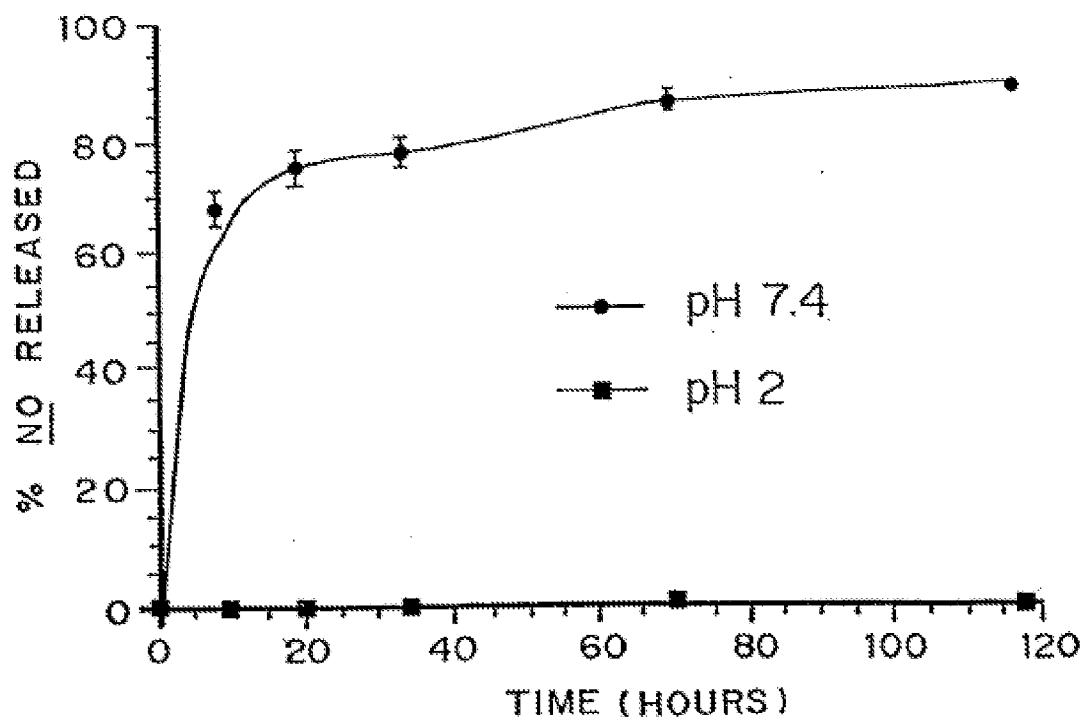


FIG. 5

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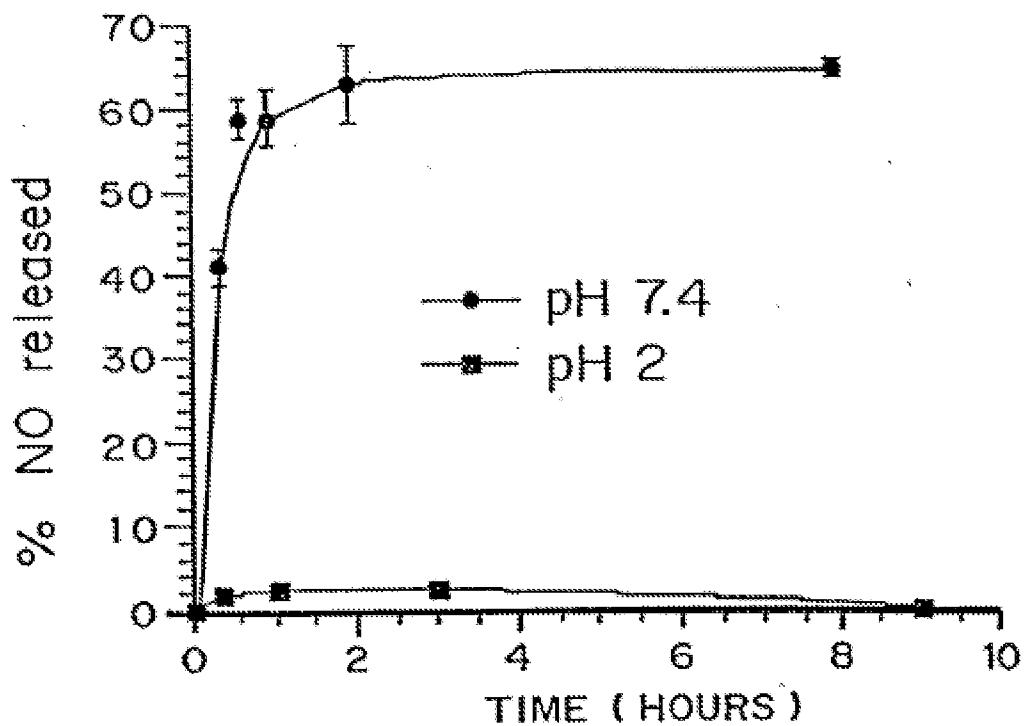


FIG. 6

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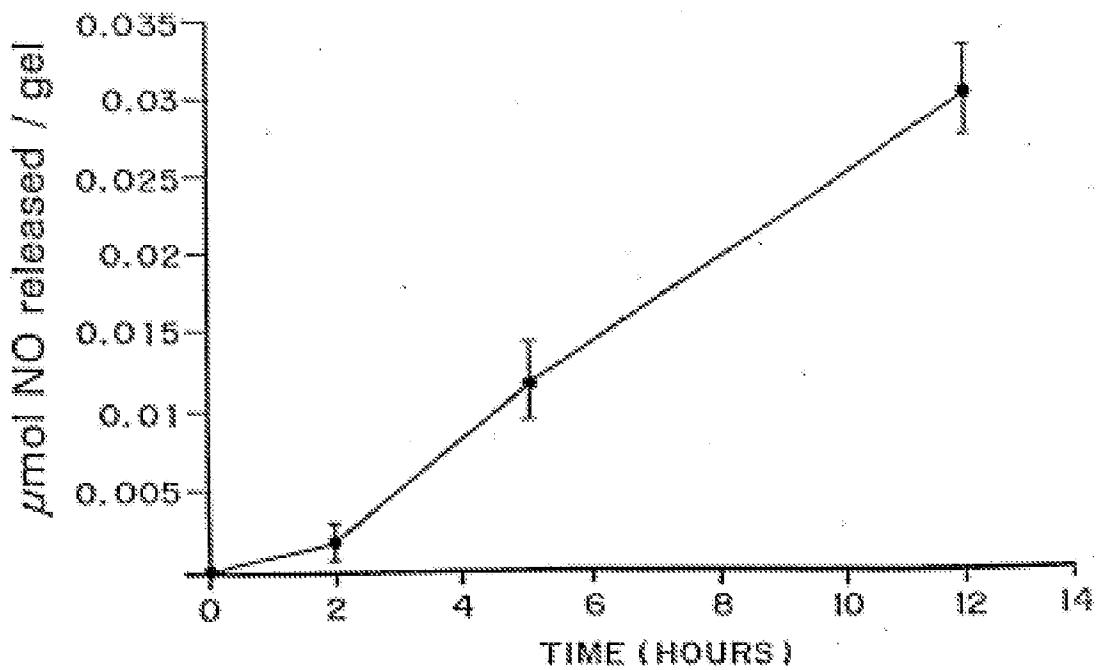


FIG. 7A

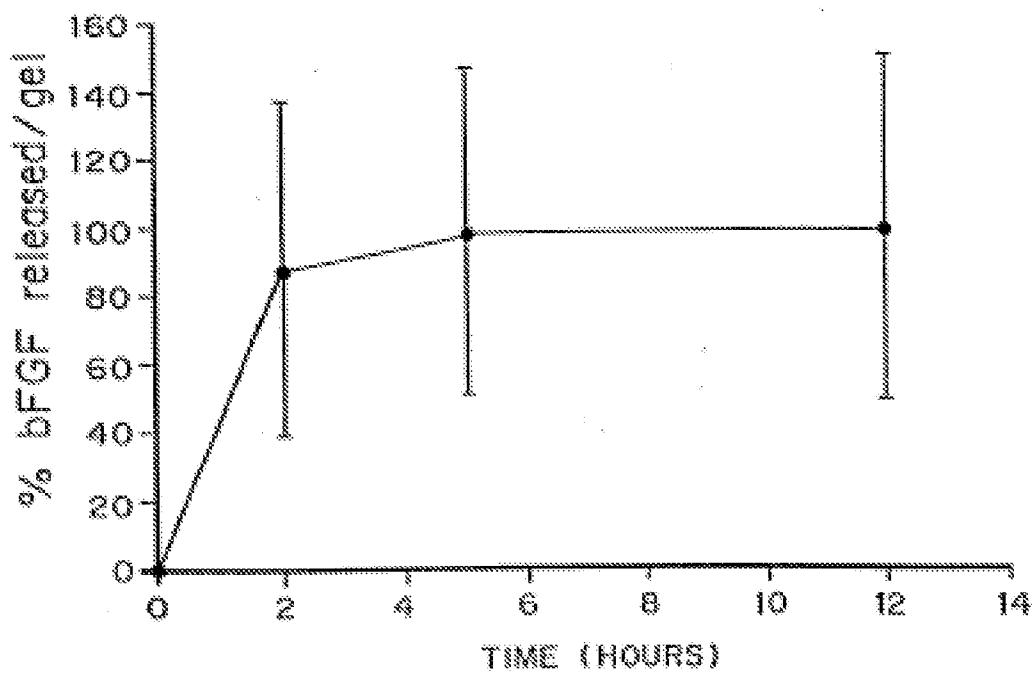


FIG. 7B

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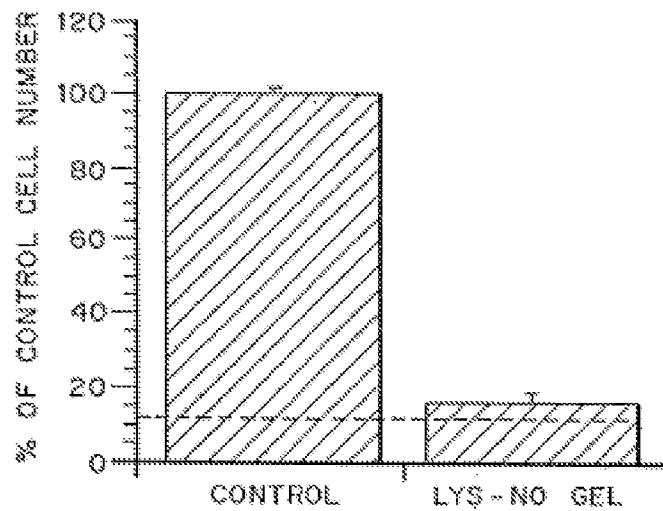


FIG. 8A

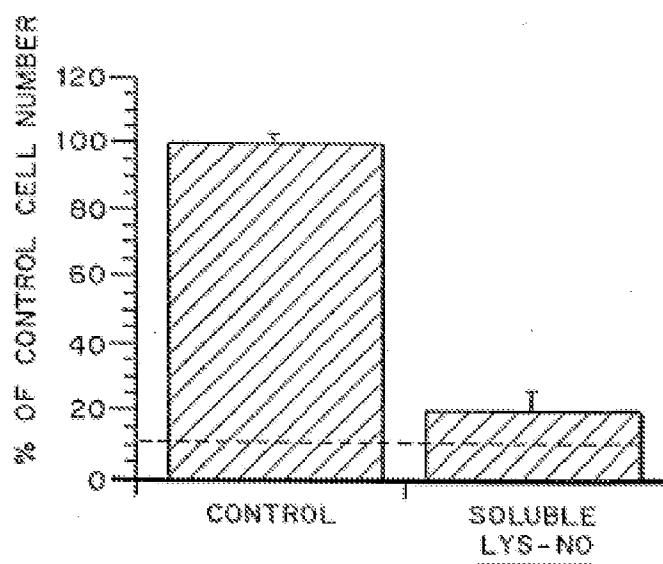


FIG. 8B

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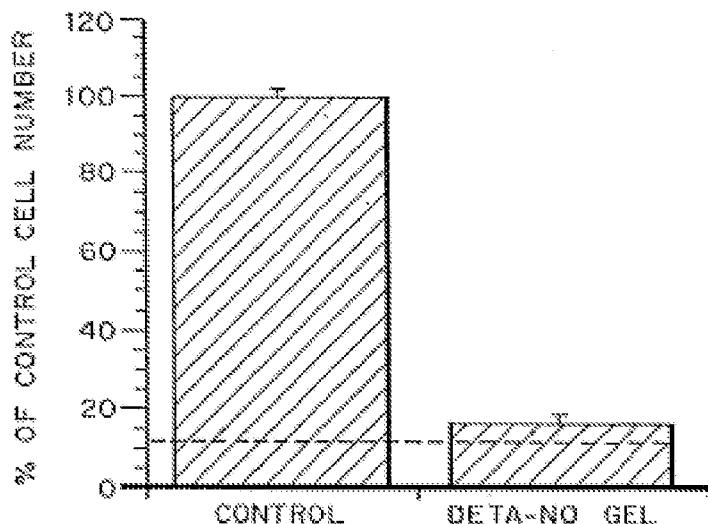


FIG. 9A

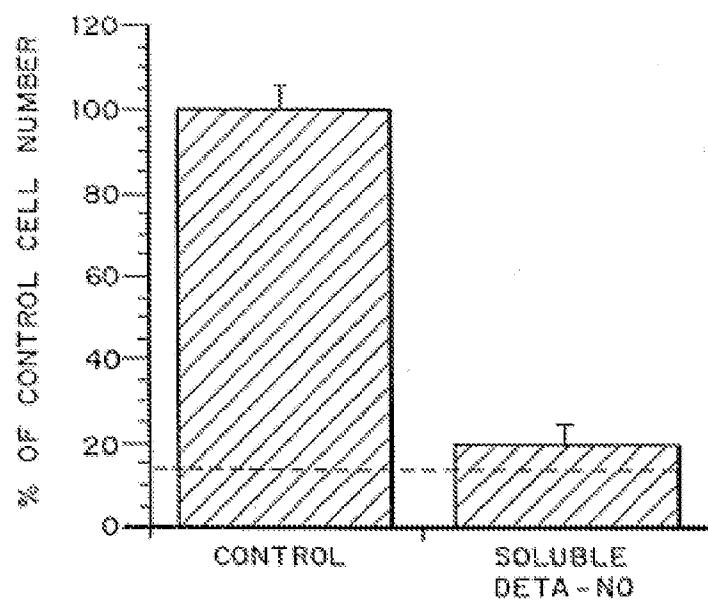


FIG. 9B

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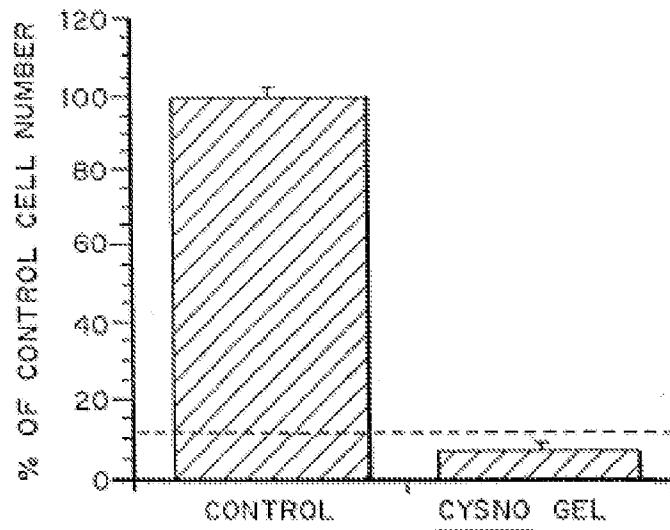


FIG. 10A

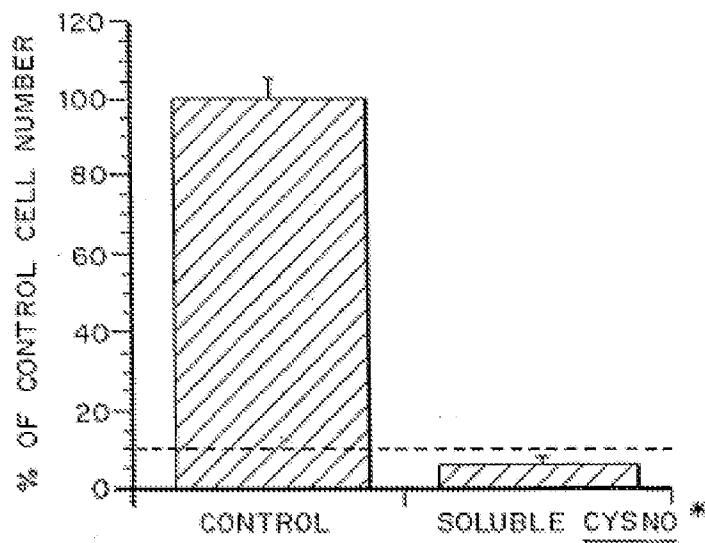


FIG. 10B

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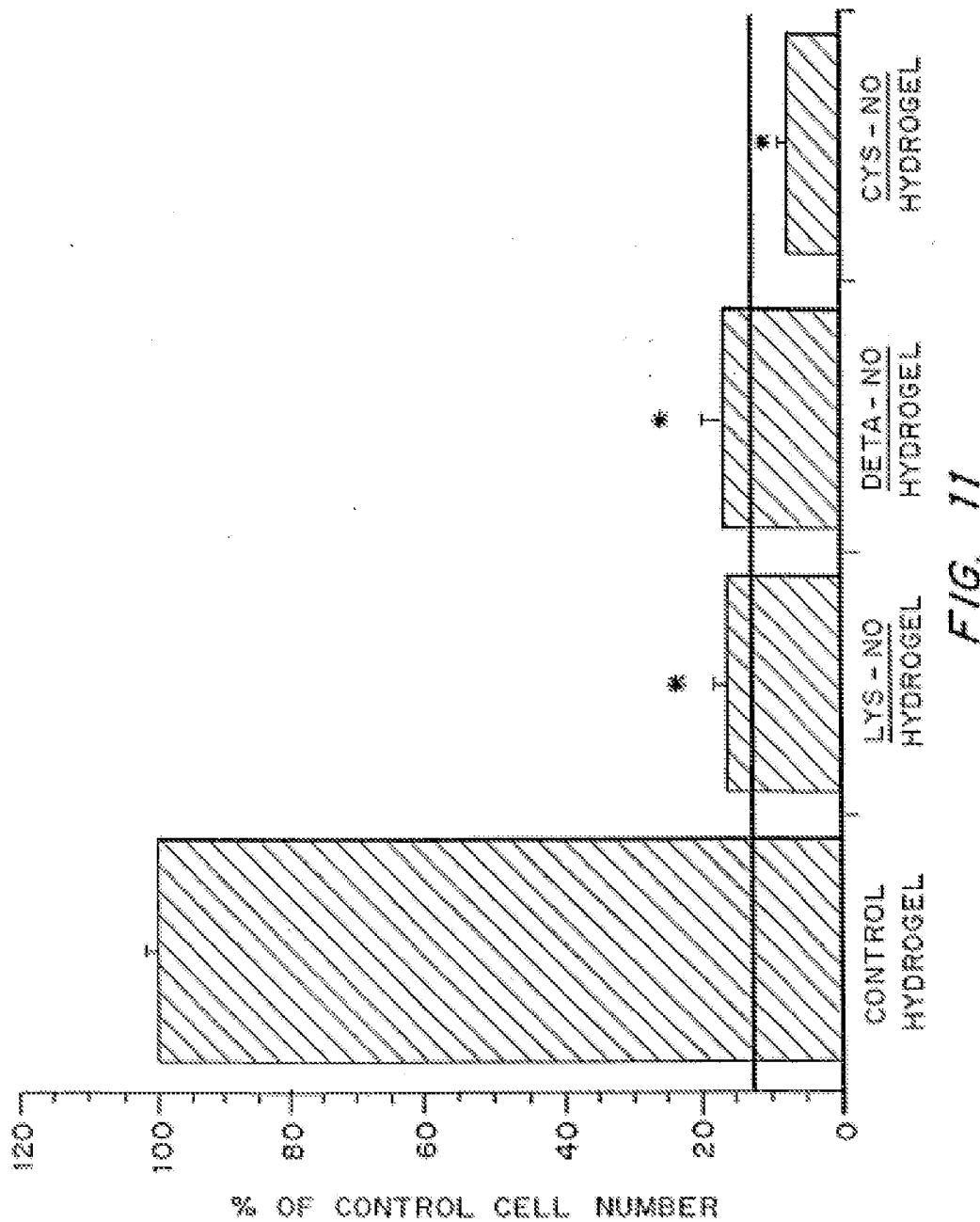


FIG. 11